# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
BURFIELD, et al.	)	
Serial Number: to be Assigned	)	Art Unit:
Filed: Concurrently	)	Examiner:
For: OBJECT-BASED NUMERIC ANALYSIS ENGINE	)	

Assistant Commissioner for Patents Washington, D.C. 20231

## ASSOCIATE POWER OF ATTORNEY

Sir:

I hereby appoint Mark Guttag, Registration Number 33,057, as my associate attorney in the above-captioned application, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent Office connected therewith.

However, please continue to address all future communications to the undersigned attorney at the following:

Ajay A. Jagtiani
JAGTIANI & ASSOCIATES
Democracy Square Business Center
10379-B Democracy Lane
Fairfax, Virginia 22030

Respectfully submitted,

Registration Number 35,205

JAGTIANI & ASSOCIATES Democracy Square Business Center 10379-B Democracy Lane Fairfax, Virginia 22030 (703) 591-2664

October 9, 1998

# DECLARATION FOR PATENT APPLICATION AND APPOINTMENT OF ATTORNEY

As a below-named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and toint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention (Design, if appli

cable)	entitled: OBJECT-BASED NUMERIC	ANALYSIS ENGINE, the specification of whi	ch (check one).	
$\times$	is attached hereto.			
	was filed on applicable).	as Application Serial No,	, and was amended on	(ıf
	was filed on(if applicable).	as International Application (PCT) No.	, and was amended	on

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1 56(a). I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which the priority is claimed.

PRIOR FOREIGN APPLICATION(S)

Number	COUNTRY	DAY/MONTH/YEAR FILED	PRIORITY CLAIMED
			Yes No
			Yes No

1 hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating The United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, 5 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

4	APPLICATION NUMBER	FILING DATE	STATUS (Patented, Pending or Abandoned)
A. Carrie			
912			
030			

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine, or imprisonment, or both, under Section 1001 of Tute 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I (We) hereby appoint as my (our) attorneys, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Ajay A. Jagtiani, Registration Number 35,205.

Send correspondence to:

JAGTIANI & ASSOCIATES 10379-B Democracy Lane Fairfax, Virginia 22030

Telephone calls to: Ajay A. Jagtiani (703) 591-2664

FX can callowing pages for additional joint invent

Full Name of First or Sole BURFIELD, Evan C		Citizenship United States
Residence Address - Stree 9852 Fairfax Square		Post Office Address Street QED Innovations, 4013 Williamsburg Court
City Fairfax		Cop Fairfax
State or Country Virginia	Z <sub>1</sub> p 22031	State or Country 2tp Viriginia 22032
DATE 10/13/98		SHOWATURE SHE BLO

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	Page 2	
Full Name of Additional Joint Inventor CHANG, Chia Chen	Citizenship United States	
Residence Address - Street 804 Lawton Street	Post Office Address Street QED Innovations, 4013 Williamsburg Court	
City McLean	City Fairfax	
State or Country Zip Virginia 22101	State or Country Virginia  State or Country  22p 22032	
DATE 10/13/98	SIGNATURE OF THE STATE OF THE S	
Full Name of Additional Joint Inventor DRISSEL, Mark	Citizenship United States	
Residence Address - Street 6314 Kiteline Court Post Office Address Street QED Innovations, 4013 Williamsburg C		
City Columbia	City Fairfax	
State or Country Zip Maryland 21044	State or Country Zip Virginia 22032	
DATE 10/13/98	Wark Dissel	
Full Name of Additional Joint Inventor EICHLER, Matthew	Citizenship United States	
Residence Address - Street 2629 Washington Blvd.	Post Office Address Street QED Innovations, 4013 Williamsburg Court	
City Arlington	City Fairfax	
State or Country Zip Virginia 22201	State or Country Zip Virginia 22032	
DATE 10/13/98	SIGNATURE MARINE COLOR	
Full Name of Additional Joint Inventor GARRETT, Richard	Citizenship United States	
Residence Address - Street 9852 Fairfax Square #225	Post Office Address Street QED Innovations, 4013 Williamsburg Court	

Full Name of Additional Joint Inventor GARRETT, Richard		Citizenship United States		
Residence Address - Street 9852 Fairfax Square #225	;	Post Office Address Street QED Innovations, 4013 Williamsburg Court		
City Fairfax		City Fairfax		
State or Country Virginia	Zip 22031	State or Country Virginia	Zip 22032	
DATE 10/13/98		SIGNATURE Rich I Yawall		

See following pages for additional joint inventors

# DECLARATION FOR PATENT APPLICATION AND APPOINTMENT OF ATTORNEY Page 2

	Page 2	
Full Name of Additional Joint Inventor GROAT, Robert	Cinzenship United States	
Residence Address - Street 45862 Aberdeen Lane	Post Office Address Street QED Innovations, 4013 Williamsburg Court	
City Valley Lee	City Fairfax	
State or Country Zip Maryland 206	State or Country ZLp Virginia 22032	
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Full Name of Additional Joint Inventor KIPP, Neill	Citizenship United States	
Residence Address - Street 319 New Kent Road	Post Office Address Street QED Innovations, 4013 Williamsburg Court	
City Blacksburg	City Fairfax	
State or Country Zip Virginia 240	State or Country Zip Virginia 22032	
Дате 10/13/98	SIGNATURE	
c,		
Full Name of Additional Joint Inventor RAPP, Perry Russell	Citizenship United States	
Residence Address - Street 48278 Keel Drive	Post Office Address Street QED Innovations, 4013 Williamsburg Court	
City Lexington Park	City Fairfax	
State or Country Zip Maryland 206:	State or Country Zip Virginia 22032	
DATE 10/13/98	SIGMAPURE	

Full Name of Additional Joint Inventor		Citizenship	
Residence Address – Street		Post Office Address Street  City	
City			
State or Country	Zip	State or Country	Zip
DATE		SIGNATURE	

See following pages for additional joint inventors

P. 1

ATTORNEY DOCKET NO - NIST-000K-1
DECLARATION FOR PATENT APPLICATION AND APPOINTMENT OF ATTORNEY

	Pa	1	
Pull Name of Additional John Inventor GROAT, Robert		Cuizenship United States	
Residence Address - Stress 45862 Aberdean Lane		Pon Office Address Street QED Innovations, 4013 Williamsburg	Court
City Valley Lee		Cby Fairfax	
State or Country Maryland	21p 20692	State or Country Virginia	Zip 22032
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Fell Name of Additional Joint Inventor KIPP, Nalli		Chipmohip United States	
Residence Address – Street 319 New Kent Road		Post Office Address Street QED Innovations, 4013 Williamsburg	g Court
City City Blacksburg Fairfax			
Saits or Country Virginia	74y 24860	State or Country Virginia 22032	
Date Sic. 10/13/98 Sic.		SICHAFURE / W/Try	8
Full Name of Additional John Investor RAPP, Perry Russell		Citizenship / United States	
Residence Address - Street 48278 Keel Drive		Pon Office Address Street QED Innovations, 4013 Williamsburg	g Court
City		City	
Lexington Park		Fairfax	
Lexington Park  State or Country  Maryland	24p 20653		<i>Zip</i> 22032
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Sea following pages for additional John Inventors.

# ATTORNEY DOCKET NO. NIST-0006-1 DECLARATION FOR PATENT APPLICATION AND APPLINIMENT OF ATTORNEY

Full Name of Additional John Saren GROAT, Robert	in/	Citizenship United States	
Residence Address – Street 45862 Aberdeen Lane		Post Office Address Sevet QED Innovations, 4013 Williamsburg Court	
City Valley Les		Cay Fairfax	
State or Country Maryland	21p 20692	State or Country Zip Virginia 22032	
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Full Nurse of Additional John In KIPP, North	ventor	Citizenship United States	
Residence Address - Sevet 319 New Kent Road		Fost Office Address Servet QED Innovations, 4013 Williamsburg Court	
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State or Country Virginia	ΖΙ≱ 24060	Steer or Country Virginia	24 22032
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Residence Address - Secret 48275 Keel Drive		Post Office Address Street QED Innovations, 4013 Williamsburg Court		
City Lexington Park		Cor Fairfax		
State or Country Maryland	Ζίφ 20653	State or Crustry Virginia	224 22032	
D476 10/13/98		Signature March	<u> </u>	

Full Name of Additional John Inventor	Ciriomskip
Residence Address - Street	Post Office Address Servi
City	City
State or Country Zip	State or Country Zup
D472	SIGNATURE

See following pages for additional joins inventors.

WHEREAS, Chia Chen Chang, whose post office addresses appear below (hereinafter referred to as ASSIGNOR), has invented certain new and useful improvements in an OBJECT-BASED NUMERIC-ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed October 15, 1998, Serial Number:

;

WHEREAS, QED Innovations, whose post office address is 4013 Williamsburg Court, Fairfax Virginia, (hereinafter referred to as ASSIONEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASIGNOR, by these presents do sell, assign and transfer until said ASIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNOR's passession or control, and to provide in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole use and behalf; and for the use and behalf of ASSIGNEE's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

Inventor: Chia Chen Chang Address: 804 Lawton Street McLean, Virginia 22101	Signature  Signature  10/15/98  Date:  10/15/98  SSN::  578-64-3304  Notarization preferred but not required
State of, City/County of,	
Before me personally appeared and said acknowledges this instrument to be his (her) free act and deed this ,	, and day o
Mis commission expires	Notary Public

WHEREAS, Matthew Eichler, whose post office addresses appear below (hereinafter referred to as ASSIGNOR), has invented certain new and useful improvements in an OBJECT-BASED NUMERIC-ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed October 15, 1998, Serial Number:

WHEREAS, QED Innovations, whose post office address is 4013 Williamsburg Court, Fairfax Virginia, (hereinafter referred to as ASCIONEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world:

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNOE, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNOR'S that lawfully may be required of ASSIGNOR's in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole use and behalf and for the use and behalf of ASSIGNEE's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

Inventor: Matthew Eichler	140	al d	de	10	-
Address: 2629 Washington Blvd.,	Signatu	re			•
Arlington, Virginia 22201	Date:	(0	115	198	
	SSN.:	109	- 50 -	5191	
	Notariz	ation p	referred	but not r	equired
State of ,					
City/County of,					
Before me personally appeared and said					, and
acknowledges this instrument to be his (her) free act and deed this					_day of
		lotary .	Public		
My commission expires:					

My commission expires:

ASSIGNMENT	
WHEREAS, Mark Drissel, whose post office addresses ASSIGNOR), has invented certain new and useful improvem ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) for Letters Patent was filed October 15, 1998, Serial Number:	ents in an OBJECT-BASED NUMERIC- or which an application for United States
WHEREAS, QED Innovations, whose post office a Fairfax Virginia, (hereinafter referred to as ASSIGNEE), is desirc interest in and to the same in the United States and throughout the	ous of acquiring the entire right, title and
NOW, THEREFORE, for good and valuable consistency acknowledged, we, ASSIGNOR, by these presents do sell, assign entire right, title and interest in and to said invention and appl America, including any and all United States Letters Patent continuation-in-part and reissue of said application; and the enti invention throughout the world, including the right to apply for pathereof and to claim priority pursuant to rights accorded AS International Convention and all other available international cright, title and interest in and to any and all patents, patents importation, revalidation patents and inventor certificates which is respect of said invention.	n and transfer until said ASSIGNEE, the ication throughout the United States of granted on any division, continuation, re right, title and interest in and to said attents and inventor certificates in respect ISIGNOR under the terms of the Paris conventions and treaties; and the entire of addition, utility models, patents of addition, utility models, patents of the parts of the patents of addition, utility models, patents of the parts of the patents of the
ALSO, ASSIGNOR hereby agrees to execute any docur connection with the filing, prosecution and maintenance of application(s) or inventor certificate(s) in the United States and including additional documents that may be required to affirm invention, all without further consideration. ASSIGNOR also agree ASSIGNER's expense, to identify and communicate to ASSIGNOR information concerning the invention that are within ASSIGNOR's information concerning the invention that are within ASSIGNOR's intrher assurances and testimony on behalf of ASSIGNORE that law respect of the prosecution, maintenance and defense of any pat within the terms of this instrument. ASSIGNOR's Obligations ASSIGNOR's heirs, executors, administrators and other legal represent	said application or any other patent in foreign countries for said invention, the rights of ASSIGNEE in and to said es, without further consideration and at at ASSIGNEE's request documents and spossession or control, and to provide willy may be required of ASSIGNOR in tent application or patent encompassed under this instrument shall extend to
ASSIGNOR hereby authorizes and requests the Commissic any and all United States Letters Patent referred to above to ASSIGN in and to the same, for ASSIGNEE'S sole use and behalf, and for representatives and successors, to the full end of the term for which fully and entirely as the same would have been held by ASSIGNOI for the commission of the commiss	THEE of the entire right, title and interest the use and behalf of ASSIGNEE'S legal h such Letters Patent may be granted, as
made.	M11 1 0 -1
Inventor: Mark Drissel	Vluk Dussel
Address: 6314 Kiteline Court Columbia, Maryland 21044	Muk Dusel Signature Date: 10 /15/98 SSN:
	Notarization preferred but not required
State of, City/County of,	
City/County of	
Before me personally appeared and said acknowledges this instrument to be his (her) free act and deed this	, and day of

Notary Public

WHEREAS, Richard Garrett, whose post office addresses appear below (hereinafter referred to
as ASSIGNOR), has invented certain new and useful improvements in an OBJECT-BASED NUMERIC-
ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) for which an application for United States
Letters Patent was filed October 15, 1998, Serial Number:;

WHEREAS, OED Innovations, whose post office address is 4013 Williamsburg Court, Fairfax Virginia, (hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNORE, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said dinvention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including, additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNER also agrees, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the invention that are within ASSIGNEOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNES with the temporal protection, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNES obligations under this instrument shall extend to ASSIGNES here, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole so and behalf and for the use and behalf of ASSIGNEE's deal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

Inventor: Richard Garrett	Richal Ganett
Address: 9852 Fairfax Square #225	Signature
Fairfax, Virginia 22031	Date: OCT. 15,1998 SSN.: 330-50-9370
	Notarization preferred but not required
State ofCity/County of	
Before me personally appeared and said	. and
acknowledges this instrument to be his (her) free act and deed this	day o
J	
	Notary Public
My commission expires:	

WHEREAS, Robert Groat, whose post office addresses appear below (hereinafter referred to as ASSIGNOR), has invented certain new and useful improvements in an OBJECT-BASED NUMERIC-ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed October 15, 1998, Serial Number:

WHEREAS, QED Innovations, whose post office address is 4013 Williamsburg Court, Fairfax Virginia, (hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNOR, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filling, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the invention that are within ASSIGNOR's possession or control, and to provide intruther assurances and testimory on behalf of ASSIGNOR's that lawfully may be required of ASSIGNOR for respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR's dentities that the surface of the prosecution of the prosecution and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behalf and for the use and behalf of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

Inventor: Robert Groat Address: 45862 Aberdeen Lane Valley Lee, Maryland 20692	Signature Date: 0/15/78 SSN.: 2/5808492 Notarization preferred but not required
State of City/County of	
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acknowledges this his union to be his (not) free and in the	Notary Public
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### ASSIGNMENT

WHEREAS, Naill Kipp, whose post office addresses appear below (hereinester referred to as ASSIGNOR), has invented certain new and useful improvements in an ONIECT-BASED NUMBERC ANALYSIS EMGINE (hereinaster referred to as The INVENTION) for which an application for United States Letters Patent was filed October 15, 1998, Serial Number:

WHEREAS, QED Innovations, whose post office address is 4013 Williamshurg Court, Fairfax Virginia, (hershafter referred to an ASSIGNEZ), is desirous of acquiring the entire right, this and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, Assistant, by these presents do sell, assign and rensfer until said Assistance, the coller right, titls and interest in and to said avention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, confinuation-to-part and release of said application, and the entire right, title and interest in and to said lawention throughout the world, including the right to apply for peterns and inventor certificates in respect interest of claim priority pursuant to rights accorded Assistance under the terms of the Paris international Convention and all other available international conventions and treates; and the entire tright, title and interest in and to any and all patents, potents of addition, titling woods, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said inventor.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filling, prosecution and melatements of said application or any other pastern application(s) or inventor, certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNER in and to said invention, all without further consideration. ASSIGNER also agrees, without further consideration and at ASSIGNER seeparse, to identify and communicate to ASSIGNER at ASSIGNER request consideration and information concerning the invention that are within ASSIGNER separses, to identify and communicate to ASSIGNER set assumes and testimony on behalf of ASSIGNER that lawfully may be required of ASSIGNER assumes and testimony on behalf of ASSIGNER that lawfully may be required of ASSIGNER with ASSIGNER that implication or pastern encompassed within the terms of this instrument. ASSIGNER's objections under this instrument shall extend to ASSIGNER has been applied to the pastern encompassed within the terms of this instrument.

ASSIONOR, hereby authorizes and requests the Commissioner of Patents and Trademarks to instead and all Unified States Leakers Petant referred to above to ASSIONER of the entire right, title and install in and to this signis, for ASSIONER'S sole use and behalf, and for the use and behalf of ASSIONER'S legal representatives and stonescents, to the full end of the time for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIONOR had this sogiciament and sale not just made.

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Inventor: Neill Kipp	X/VIII//Pub
Address: 319 New Kent Road	Stonature
Blacksburg, Virginia 24060	Date: 10/15/1997
	SSN.: 260-06-0637
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State of	
Before me personally appeared and said	ane
acknowledges this instrument to be his (her) free act and deed this	sday
	Notary Public
My commission expires:	

WIJERBAS, Perry Russell Rapp, whose post office addresses appear below (hereinafter referred to a ASSIGNOR), has invented cettain row and useful improvements in an OBECT-BASED NUMBERIC-ANALYSIS ENGINE (herelaster referred to as THE INVENTION) for which an application for United Stores Latest Patent was field October 15, 1998, Serial Number:

WHEREAS, QED Innovations, whose post office address is 4013 Williamsburg Court, Fairfax Virginia, (Interinater referred to as ASSIONEY), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby actnowledged, we ASSIGNOR, by these presents do sell, assign and transfer until said ASSIGNER, the colice right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, the private and reissues of said application, and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filling, prosecution and maliterance of said application or any other potent applications(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNES in and to said invention, all without further consideration. ASSIGNES also appears, without further consideration and at ASSIGNES expectes, to identify and communicate to ASSIGNES and ASSIGNES request documents and information concerning the invention that are which ASSIGNES possession or control, and to provide further assurances and testimony on behalf of ASSIGNES that lawfully may be required of ASSIGNES with the properties of the proceeding, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNES here executed, administrators and offen legal representatives.

ASSIGNOR hereby authorizes and requests the Commissions of Patents and Trademarks to issue any and all United States Letturs Patent referred to above to ASSIGNER of the entire right, etile and interest in and to the same, for ASSIGNER'S sole use and behalf; and for the use and behalf of ASSIGNER'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNER had this assignment and agle not been

fully and entirely as the same would have been held by ASSIGN made.	OR had this assignment and sale not bee
Inventor: Perry Russell Rapp Address: 48278 Keel Drive Laxington Park, Maryland 20653	Signature Oct 15 (798
	SSN.: Notarization preferred but not require
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My commission expires:

ASSIGNMENT	
WHEREAS, Evan G. Burfield, whose post office add to as ASSIGNOR), has invented certain new and useful improve ANALYSIS ENGINE (hereinafter referred to as THE INVENTION) fo Letters Patent was filed October 15, 1998, Serial Number:	ments in an OBJECT-BASED NUMERIC- or which an application for United States
WHEREAS, QED Innovations, whose post office a Fairfax Virginia, (hereinafter referred to as ASSIGNEE), is desire interest in and to the same in the United States and throughout the	ous of acquiring the entire right, title and
NOW, THEREFORE, for good and valuable cons acknowledged, we, ASSIGNOR, by these presents do sell, assig entire right, title and interest in and to said invention and app America, including any and all United States Letters Patent continuation-in-part and reissue of said application; and the ent invention throughout the world, including the right to apply for p thereof and to claim priority pursuant to rights accorded A International Convention and all other available international right, title and interest in and to any and all patents, patents importation, revalidation patents and inventor certificates which respect of said invention.	an and transfer until said ASSIGNEE, the lication throughout the United States of granted on any division, continuation, ire right, title and interest in and to said attents and inventor certificates in respect SSIGNOR under the terms of the Paris conventions and treaties; and the entire of addition, utility models, patents of the part of addition, utility models, patents of the part of the patents
ALSO, ASSIGNOR hereby agrees to execute any doct connection with the filing, prosecution and maintenance of application(s) or inventor certificate(s) in the United States and including additional documents that may be required to affirm invention, all without further consideration. ASSIGNOR also agr ASSIGNDER expense, to identify and communicate to ASSIGNER information concerning the invention that are within ASSIGNOR further assurances and testimony on behalf of ASSIGNEE that la respect of the prosecution, maintenance and defense of any pwithin the terms of this instrument. ASSIGNORS obligations ASSIGNORS heirs, executors, administrators and other legal repre-	said application or any other patent lin foreign countries for said invention, the rights of ASSIGNEE in and to said ees, without further consideration and at E at ASSIGNEE'S request documents and 'S possession or control, and to provide wfully may be required of ASSIGNOR in attent application or patent encompassed under this instrument shall extend to
ASSIGNOR hereby authorizes and requests the Commission and all United States Letters Patent referred to above to ASSI in and to the same, for ASSIGNEE's sole use and behalf; and for representatives and successors, to the full end of the term for white fully and entirely as the same would have been held by ASSIGNOR.	GNEE of the entire right, title and interest the use and behalf of ASSIGNEE'S legal th such Letters Patent may be granted, as
made.	adRLO
Inventor: Evan G. Burfield Address: 9852 Fairfax Square #225 Fairfax, Virginia 22031	Signature Date: 10   15   98 SSN.: 229-23-9509 Notarization preferred but not required
State of, City/County of,	
Before me personally appeared and said  acknowledges this instrument to be his (her) free act and deed the	, and is day of

Notary Public

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# A FROMED STATEMENT (DECLARATION) BY A SMALL BUSINESS CONCERN CLADAING SAIAL FATITY STATES PADER 37 C. F.R. 88 1.9(F) AND 1.27(C)

Thereby de Jarethat Lart

The course of two sit all brongers concern identified below

III an official of the small brongs concern empowered to act on behalf of the concern identified below

Same of Concern OFB innovarious

Toldies, 4013 Williamsburg Court, Parfax, V v. 22032

Thereby declare that the above identified "nall highless concern qualifies as a small business concern as defined in 13 CFR 121%. 15, and reproduced in 3" CFR 1994, for European of Paying reduced fees under section 41 in and the of Title 35. United States as more generous principles of the Papers of Bying related free under section action and this of the 33 contributions of the initial the number of eighbors of all the dates in the first littless, does not exceed 500 presents or proposes of this section; in contribution of the proposes of this section; if yet number of ellipsyches he be entitle over the greators fread each of the content of the persons employed as full-time from time of temporary fread each of the proposes of this section. In the content of the persons employed on full-time from time of temporary fread edges of the persons of the fread each of all contents are all time for the persons of the persons of the fread each of all contents are all time for the persons of the persons of the fread each of the content of the other, or a fund party or paties controls when each of the persons of or has the power to course I both

Thereby declare that nebts timest contract of law have been somewed to and remain with the small histings, concern identified above sub regard to the man a described in

- (II) the specification filed research with the rite as based another
- [] The patent applied on identified a save
- Diffic PCT International patent application identified above
- The patent number of artificial affaces

If the nebbs held by the above identified small business concern are not exclusive, each individual, concern or organization having lights to the invention until file separate ventred valences around to their status as small entities, and no rights to the aweithen are ingues to the meation unto the separate verified statement overning to their status as small entities, and no rights to the attention as half to any person, other than the proving, who would not quality as an independent inventor under \$\times ONE 1 states of that person under the invention on by after concern who would not quality as a small insenses concern quality \$\times ONE 1 states or a neutroid organization under C CFR Lines. Each person or organization having any nelter in the invention is losted below

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Unitable, dischire that all statements made herein of me, own browledge are true and that all summans made on information and thereon, distinct that all solutions much mercan or two own encovarings are the own trail and seatments make on anomalous and heldels are believed to be true, and in their that these statements want made until the besidence of the seatments of the mercan and the seatments of th neurct age noneven in our ring, and norther than these statements were made with the knowledge that willful dake statements and the like so made are publishable by fine, or improvement, or both, under section 1001 or 1 title 38 or the United States Code, and that the so made are purechable to the or empticonnent, or both, under section JUH to Liste So at the United States Code, and that such width take distances; more to quartize the validity of the application are posted to suage thereon, or any potent to which the

uned statement is directed Chia Chen Chang, President 4013 Williamsburg Court, Lairlos, V. v. 22032